U.S. Patent Application No. 09/913,858
Attorney's Docket No. 030560-057

REMARKS

Entry of the foregoing amendments is respectfully requested.

Claim 59 has been deleted and claim 60 has been amended. The final clause of claim 60 should not be included in this claim since it is directed to the ribozyme technique and the DNA would not comprise a "deletion, insertion or substitution mutation." Without the final clause regarding the inverse orientation, which should not have been included, claim 59 would have been duplicative and is thus being deleted.

Claims 60, 61, 70, 72 and 74 have also been amended to recite that the host may be selected from "plant tissues." This aspect of the invention finds support at the very least at from page 16, seventh line from the bottom, to page 17, first paragraph.

New claims 108-119 have been added by this amendment. These claims are similar to claims 62-65, 76-79 and 83-86, but depend from different claims. These embodiments were part of claims recited in the originally filed application and thus no new matter is being presented.

In complete response to the Requirement for Restriction issued by the Patent and Trademark Office on November 18, 2002, applicant hereby elects with traverse the invention of Group II, claims 49-52, 62-65, 76-79 and 83-86 for prosecution in this application. Since new claims 108-119 are similar to claims 62-65, 76-79 and 83-86, these claims are believed to be properly included in Group II. Group II is directed to a vector comprising SEQ ID NO:1 in antisense orientation, a ribozyme and host cell comprising

same, as well as a method of using said host cell comprising SEQ ID NO:1 in an antisense orientation.

The traversal is based upon the fact that the instant application was filed under §371. Applicant is thus entitled to a "unity of invention-standard" for determining restriction. It is respectfully submitted that "unity of invention" exists in the instant case. As acknowledged in the Official Action, the four Groups of Invention are all united as being drawn to compositions comprising DNA molecules homologous to or complementary to the sequence set forth as SEQ ID NO:1 and methods of using same.

Applicant does not agree with the statement in the Official action that the claimed invention is not a "contribution over the prior art." Applicant believes that the present invention is new and inventive over the state of the art. Therefore, the Groups of Invention are linked by one single technical feature, namely the inventive DNA molecule according to claim 35 of the application.

The Official Action asserts that the "Groups are united in that they are drawn to compositions comprising DNA molecules homologous to or complementary to the sequence set forth as SEQ ID NO:1 and methods of using such compositions." Page 2. This assertion, however, is in error. The DNA molecules comprising DNA molecules homologous to or complementary to the sequence set forth as SEQ ID NO:1 must also code for a "plant protein having fucosyl transferase activity." *See, e.g.*, claims 35 and 36.

The Examiner cites, in particular, EMBL Database ID: B67847 (D4 in the International Search Report), EMBL Database ID: AQ158899 (D5 in the Search Report)

and EMBL Database ID: AQ328306 (D6 in the Search Report). However, these publications do not disclose a DNA molecule according to the present invention. EMBL Database ID: B67847 (D4) relates to a sequence isolated from *Arabidopsis thaliana* with a length of 669 bp. EMBL Database ID: AQ158899 (D5) relates to a sequence from Oryza sativa with a length of 663 bp. EMBL Database ID: AQ328306 (D6) also relates to a sequence from Oryza sativa with a length of 616 bp. These sequences are, therefore, much shorter than the sequence SEQ ID. No. 1, having 2198 bp and coding for a fucosyl transferase. There is no teaching or even suggestion that the sequences of the cited art code for a "plant protein having fucosyl transferase activity," as recited in the instant claims. These references thus fail to teach or suggest DNA molecules as claimed.

These publications thus fail to teach the special technical feature that links the claims of the four Groups of Invention. Unity of invention for the four Groups of Invention thus exist. Withdrawal of the Restriction Requirement is thus respectfully requested.

At the very least, the Restriction Requirement should be modified. Group II includes claims directed to DNA molecules and vectors relating to the anti-sense and ribozyme techniques (see claims 49-52), recombinant hosts relating to the knock-out and ribozyme technique (claims 62-65), and a method for the production of glycoproteins without α-1,3-fucosyl residues using the knockout and ribozyme technique (claims 76-79 and 83-86). Claims 55-61 (now claims 55-59 and 61), which have been included in Group III, are directed to a method for the production of recombinant hosts with respect to the

knockout, anti-sense and ribozyme technique. These claims are thus believed to be more closely related to the Group II claims than the other Group III claims, which otherwise relate only to the PNA (peptide nucleic acid) technique (claims 70-75, 80-82 and 87-89). Claims 62-65, for example, claim the hosts prepared according to the methods of claims 60 and 61. Therefore, including claims 55-59 and 61 with Group II is believed to be more appropriate.

According to the MPEP §803, a restriction between patentably distinct inventions is proper only where there is a serious burden on the Examiner to examine all the claims in a single application. This is true even when appropriate reasons exist for a restriction requirement.

In the present application, it is believed that because there is a close relationship between the subject matter of the four sets of claims, there would be no serious burden on the Examiner to examine all the claims at this time.

In view of the above, it is respectfully requested that the restriction requirement be withdrawn, or at the very least altered such that claims 55-61 are included with the Group II invention.

In the event that there are any questions relating to this amendment or the application in general, it would be appreciated if the Examiner would contact the undersigned attorney at (508) 339-3684.

U.S. Patent Application No. 09/913,858
Attorney's Docket No. 030560-057

Early and favorable action in the form of a notice of allowance is respectfully requested.

Respectfully submitted,

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Attachment to Amendment and Response to Restriction Requirement dated December 18, 2002

Marked-up Claims 60, 61, 70, 72 and 74

60. (Amended) A method of preparing recombinant hosts selected from the group consisting of host cells, plant cells, insect cells, plant tissues, plants and insects wherein the production of GlcNAc-α-1,3-fucosyl transferase is suppressed or inhibited, comprising

inserting into a recombinant host, a biologically functional vector which comprises a DNA molecule according to claim 51 [, wherein said DNA sequence comprises a deletion, insertion or substitution mutation].

61. (Amended) A method of preparing recombinant hosts selected from the group consisting of host cells, plant cells, insect cells, plant tissues, plants and insects, comprising

inserting a DNA molecule according to claim 35 into the genome of said host at the position of a non-mutated, homologous sequence,

wherein said DNA sequence comprises a deletion, insertion or substitution mutation.

70. (Amended) A method of producing a host selected from the group consisting of plants, insects, cells, plant tissues, plant cells and insect cells having blocked expression of GlcNAc-αl,3-fucosyl transferase, comprising

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Marked-up Claims 60, 61, 70, 72 and 74

inserting into said host a peptide nucleic acid molecule according to claim 66.

72. (Amended) A method of producing a host selected from the group consisting of plants, insects, cells, plant tissues, plant cells and insect cells having blocked expression of GlcNAc-α1,3-fucosyl transferase, comprising

inserting into said host a peptide nucleic acid molecule according to claim 66.

74. (Amended) A method of producing a host selected from the group consisting of plants, insects, cells, plant tissues, plant cells and insect cells having blocked expression of GlcNAc-α1,3-fucosyl transferase, comprising

inserting into said host a peptide nucleic acid molecule according to claim 68.